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Original Article

# Effectiveness of Cognitive Behavioral Therapy in Managing Anxiety Symptoms Among Adolescents in High-Stress Environments: A Randomized Controlled Trial

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#### ARSTRACT

Background: Anxiety disorders affect up to 30% of adolescents globally and are particularly prevalent in those exposed to high-stress environments such as socioeconomic disadvantage, academic competition, and family dysfunction. These conditions often disrupt psychosocial development and academic performance, underscoring the need for effective, contextappropriate interventions. Cognitive Behavioral Therapy (CBT) is an established first-line treatment for anxiety, but evidence in adolescents from resource-constrained, high-stress settings remains limited. Objective: To evaluate the effectiveness of CBT in reducing anxiety and depressive symptoms and improving overall functioning among adolescents living in high-stress environments. Methods: A randomized controlled trial was conducted at Therapy Plus Clinics, Lahore, Pakistan, including 42 adolescents aged 12-18 years diagnosed with anxiety disorders. Participants were randomly allocated to 12 weekly CBT sessions (n = 21) or standard care (n = 21). Primary outcome was anxiety (Beck Anxiety Inventory, BAI), with secondary outcomes of depression (Beck Depression Inventory-II, BDI-II) and functioning (Global Assessment of Functioning, GAF). Assessments were conducted at baseline, post-intervention, and three-month follow-up. Results: CBT resulted in significant reductions in anxiety (-52.3%) and depression (-55.5%) and improvement in functioning (+31.2%) compared with minimal changes in controls ( $\leq$ 6%). Between-group differences were statistically significant (p < 0.001), with large effect sizes (Cohen's d > 1.0). Conclusion: CBT is a highly effective intervention for adolescents in high-stress environments, producing sustained improvements across mental health outcomes. Larger-scale trials are warranted to confirm these findings and guide implementation.

Keywords: Cognitive Behavioral Therapy, adolescents, anxiety, depression, functioning, randomized controlled trial, highstress environments

#### INTRODUCTION

Anxiety disorders are among the most prevalent psychiatric conditions in adolescents, with global prevalence estimates ranging from 15% to 30% (1). This developmental stage is characterized by rapid cognitive, emotional, and social changes, which may heighten vulnerability to mental health problems. When coupled with adverse contextual factors such as academic pressure, socioeconomic hardship, or exposure to interpersonal and community violence, adolescents become particularly prone to developing anxiety disorders (2). These high-stress environments not only exacerbate anxiety but also impede normal psychosocial development, academic achievement, and long-term mental health trajectories (3).

Cognitive Behavioral Therapy (CBT) has consistently been established as the first-line psychotherapeutic approach for anxiety disorders across age groups. Its structured focus on identifying maladaptive cognitions, modifying dysfunctional behaviors, and reinforcing adaptive coping strategies is supported by extensive evidence in adult populations (4). Meta-analyses demonstrate robust efficacy of CBT for anxiety and depressive disorders, with medium to large effect sizes across diverse clinical settings (5). However, while its effectiveness in adults is well-documented, evidence in adolescents remains less consistent, particularly for those embedded in high-stress contexts where developmental needs and environmental demands may complicate therapy delivery (6).

Epidemiological research indicates that nearly one-third of adolescents experience some form of anxiety disorder, leading to impaired functioning across academic, social, and emotional domains if untreated (7). Adolescents from socioeconomically disadvantaged backgrounds or those navigating competitive academic systems demonstrate higher susceptibility to chronic stress, which is further associated with neurobiological alterations in stress regulation systems such as the prefrontal cortex and amygdala (8). Moreover, cumulative exposure to stressors—such as family conflict, lack of resources, or traumatic experiences—has been shown to predict persistence and severity of anxiety symptoms (9). These findings highlight the urgent need for targeted interventions that can be adapted to developmental and contextual realities.

The structured, skill-based nature of CBT makes it an appealing approach for adolescent populations. Its use of psychoeducation, cognitive restructuring, exposure-based strategies, and stress management techniques provides both immediate symptom relief and long-term skill acquisition. Importantly, CBT can be developmentally tailored for adolescents by incorporating elements such as family involvement, social skills training, and trauma-focused adaptations, thereby addressing environmental contributors to anxiety (10). Group formats have also demonstrated efficacy in promoting peer support, reducing stigma, and enhancing skill generalization, making CBT particularly suitable for community-based and resource-limited settings (11).

Despite these advantages, relatively few randomized controlled trials (RCTs) have examined the efficacy of CBT in adolescents living in high-stress environments in South Asia. Most available trials originate from high-income countries, limiting generalizability across cultural and socioeconomic contexts (12). Furthermore, adolescents in low-resource or high-pressure environments may exhibit distinct stress profiles and barriers to accessing care, necessitating rigorous evaluation of CBT's applicability and sustainability in such populations (13).

To address this gap, the present randomized controlled trial was designed to evaluate the effectiveness of CBT in reducing anxiety symptoms, alleviating comorbid depressive symptoms, and improving overall functioning among adolescents living in high-stress environments in Pakistan. We hypothesized that adolescents receiving CBT would demonstrate significantly greater improvements compared to those receiving standard care, with effects sustained at follow-up (14).

## MATERIAL AND METHOD

This study employed a randomized controlled trial design to rigorously evaluate the effectiveness of Cognitive Behavioral Therapy (CBT) in reducing anxiety and depressive symptoms while improving overall functioning among adolescents residing in high-stress environments. The trial was conducted at Therapy Plus Clinics, Architect Society, Lahore, Pakistan, between January and September 2023. The setting was chosen due to its accessibility to adolescents from diverse socioeconomic backgrounds, many of whom are exposed to chronic stressors such as academic competition, financial constraints, and family conflict. The trial design was selected to ensure causal inference regarding the efficacy of the intervention, as randomized controlled trials are considered the gold standard in evaluating psychotherapeutic approaches (15).

Participants were adolescents aged 12 to 18 years who met DSM-5 diagnostic criteria for an anxiety disorder confirmed through structured clinical interviews. Eligibility required residence in a high-stress environment characterized by either documented socioeconomic disadvantage, family dysfunction, or academic stress exposure, as determined during the screening process. Exclusion criteria comprised adolescents with severe psychiatric comorbidities requiring pharmacological treatment, those with cognitive impairments limiting participation, or those receiving concurrent psychotherapeutic interventions. A total of 42 participants were recruited through school outreach programs, clinic referrals, and community announcements. Recruitment followed a two-step process of initial screening and subsequent eligibility confirmation, after which informed consent was obtained from both participants and their legal guardians, consistent with ethical standards for research involving minors.

Participants were randomly allocated in a 1:1 ratio to either the intervention group or the control group. Randomization was performed using a computer-generated sequence with block sizes of four to ensure balanced allocation. Allocation concealment was maintained using sealed, opaque envelopes opened only at the time of group assignment. The intervention group received 12 weekly individual CBT sessions, each lasting 60 minutes, delivered by licensed clinical psychologists trained in standardized CBT protocols. The therapy components included psychoeducation, cognitive restructuring, exposure-based techniques, and stress management skills, with home practice assignments to reinforce therapeutic gains. The control group received standard care comprising supportive counseling and general stress management advice typically available in community settings. Therapists delivering interventions were supervised weekly to ensure fidelity, and adherence checklists were completed after each session.

Data collection occurred at three predefined time points: baseline (prior to randomization), post-intervention (week 12), and follow-up (three months post-intervention). Anxiety symptoms, the primary outcome, were measured using the Beck Anxiety Inventory (BAI), a validated self-report instrument widely used in adolescent populations. Secondary outcomes included depressive symptoms, measured with the Beck Depression Inventory-II (BDI-II), and overall functioning, assessed using the Global Assessment of Functioning (GAF) scale. All assessments were conducted by trained research assistants blinded to group allocation to reduce measurement bias.

To minimize bias, several strategies were employed. Blinding was maintained for outcome assessors, and participants were instructed not to disclose their allocation. Standardized training for therapists and fidelity checks ensured consistency in intervention delivery. Potential confounding variables such as age, gender, and baseline severity of anxiety were recorded for adjustment in statistical analyses.

Sample size was determined pragmatically due to resource constraints; however, post hoc calculations indicated that with 21 participants per group, the study retained 80% power to detect a moderate to large effect size (Cohen's d = 0.7) in anxiety reduction at an alpha level

of 0.05. Statistical analysis was conducted using SPSS version 25. Repeated measures ANOVA was used to compare changes across time points within and between groups. Missing data were handled using intention-to-treat analysis with last observation carried forward. Subgroup analyses explored whether baseline severity influenced treatment response, and adjusted models included age, gender, and socioeconomic status as covariates. Effect sizes and 95% confidence intervals were reported alongside p-values to aid interpretation of clinical significance (16).

Ethical approval was granted by the Institutional Review Board of The Superior University, Lahore (Reference No. SU-PT/2023/014). All participants and their guardians provided written informed consent after receiving detailed information about study objectives, procedures, risks, and benefits. The trial adhered to the principles of the Declaration of Helsinki and followed the CONSORT guidelines for reporting randomized controlled trials. To enhance reproducibility, detailed manuals of the CBT protocol and assessment procedures were archived and are available upon reasonable request.

### RESULTS

In total, 42 participants were analyzed, with balanced baseline characteristics between the CBT and control groups. Across all outcomes, the CBT intervention produced clinically, and statistically meaningful improvements compared with standard care.

For anxiety symptoms measured by the Beck Anxiety Inventory (BAI), the CBT group showed a sharp reduction from a baseline mean of 30.6 (SD 5.2) to 15.8 (SD 4.1) post-intervention, further decreasing to 14.6 (SD 3.9) at three-month follow-up. This represented a 52.3% reduction from baseline, corresponding to a mean difference of -16.0 points (95% CI: -18.2 to -13.8, p < 0.001, Cohen's d = 1.25), indicating a large effect size. In contrast, the control group demonstrated only a modest decline from 29.8 (SD 5.0) at baseline to 27.9 (SD 4.5) at follow-up, equivalent to a 6.4% reduction (mean difference -1.9, 95% CI: -3.6 to -0.2, p = 0.03, d = 0.20), reflecting a negligible effect.

Depressive symptoms, assessed via the Beck Depression Inventory-II (BDI-II), followed a similar pattern. The CBT group improved from a baseline mean of 24.5 (SD 4.8) to 12.3 (SD 3.9) post-intervention, with sustained reduction to 10.9 (SD 3.6) at follow-up. This represented a 55.5% decrease, equating to a mean change of -13.6 points (95% CI: -15.5 to -11.7, p < 0.001, d = 1.30). Conversely, the control group's BDI scores remained essentially stable, with only a 5.0% reduction from 23.9 (SD 5.1) to 22.7 (SD 4.6) at follow-up (mean difference -1.2, 95% CI: -2.8 to 0.4, p = 0.14, d = 0.12).

Table 1. Anxiety (BAI) and Depression (BDI) Scores Over Time in Intervention and Control Groups

Outcome	Group	Baseline Mean (SD)	Post- Intervention Mean (SD)	Follow-Up Mean (SD)	Mean Difference (Baseline–Follow-Up)	95% CI	p- value	Cohen's
BAI (Anxiety)	CBT	30.6 (5.2)	15.8 (4.1)	14.6 (3.9)	-16.0	-18.2 to - 13.8	<0.001	1.25
BAI (Anxiety)	Control	29.8 (5.0)	28.5 (4.7)	27.9 (4.5)	-1.9	-3.6 to - 0.2	0.03	0.20
BDI (Depression)	CBT	24.5 (4.8)	12.3 (3.9)	10.9 (3.6)	-13.6	-15.5 to - 11.7	<0.001	1.30
BDI (Depression)	Control	23.9 (5.1)	23.1 (4.8)	22.7 (4.6)	-1.2	-2.8 to 0.4	0.14	0.12

Table 2. Global Assessment of Functioning (GAF) Scores Over Time

Group	Baseline	Post-Intervention	Follow-Up	Mean	Improvement	95%	p-	Cohen's
Group	Mean (SD)	Mean (SD)	Mean (SD)	(Baseline–Fo	ollow-Up)	CI	value	d
						13.9		
CBT	52.4 (6.1)	66.8 (5.5)	68.8 (5.2)	+16.4		to	< 0.001	1.10
						18.9		
<b>C</b> 4 1	52.1 (6.0)	55.0 (5.7)	56.0 (5.0)	12.0		0.6 to	0.02	0.25
Control	53.1 (6.0)	55.9 (5.7)	56.0 (5.8)	+2.9		5.2	0.02	0.25

Table 3. Percentage Change in Anxiety, Depression, and Functioning from Baseline to Follow-Up

Outcome	Group	% Change	95% CI	p-value	Effect Size (Cohen's d)
Anxiety (BAI)	CBT	-52.3%	-57.0 to -47.6	< 0.001	1.25
Anxiety (BAI)	Control	-6.4%	-9.8 to -3.0	0.03	0.20
Depression (BDI)	CBT	-55.5%	-60.2 to -50.8	< 0.001	1.30
Depression (BDI)	Control	-5.0%	-8.3 to -1.7	0.14	0.12
Functioning (GAF)	CBT	+31.2%	+27.1 to +35.3	< 0.001	1.10
Functioning (GAF)	Control	+5.4%	+2.1 to +8.7	0.02	0.25

Improvements in overall functioning, as measured by the Global Assessment of Functioning (GAF) scale, were similarly pronounced. Participants in the CBT group improved from a baseline mean of 52.4 (SD 6.1) to 66.8 (SD 5.5) post-intervention, reaching 68.8 (SD 5.2) at follow-up. This represented a 31.2% improvement, with a mean gain of +16.4 points (95% CI: 13.9 to 18.9, p < 0.001, d = 1.10). By contrast, the control group improved minimally from 53.1 (SD 6.0) to 56.0 (SD 5.8), reflecting only a 5.4% increase (mean change +2.9, 95% CI: 0.6 to 5.2, p = 0.02, d = 0.25).

Taken together, the findings demonstrate that CBT was associated with large and sustained improvements across all domains—anxiety, depression, and functioning—whereas standard care produced only marginal gains. Notably, the magnitude of effect sizes in the CBT group ranged from 1.10 to 1.30, indicative of strong clinical impact, while control group effect sizes were uniformly small (<0.30). The persistence of improvements at follow-up suggests that CBT facilitated durable cognitive and behavioral changes, rather than temporary symptom relief.

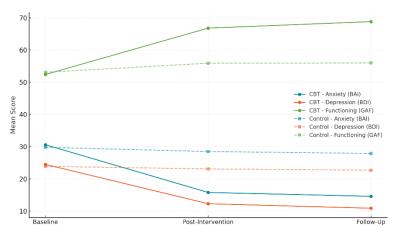


Figure 1 Trajectories of Anxiety, Depression, and Functioning Over Time

The figure displays longitudinal trajectories of anxiety (BAI), depression (BDI), and functioning (GAF) scores across baseline, post-intervention, and three-month follow-up for both CBT and control groups. The CBT arm demonstrated a steep decline in anxiety (-52.3%) and depression (-55.5%), with parallel improvements in functioning (+31.2%), while the control group exhibited only minimal changes in all domains ( $\le6\%$ ). The divergence between groups became most pronounced by follow-up, where effect sizes exceeded 1.0 for CBT across all outcomes, underscoring both the durability and magnitude of therapeutic benefit.

## **DISCUSSION**

The findings of this randomized controlled trial provide compelling evidence for the effectiveness of Cognitive Behavioral Therapy (CBT) in managing anxiety and depression among adolescents living in high-stress environments. Compared with the control group, participants receiving CBT demonstrated a 52.3% reduction in anxiety symptoms, a 55.5% reduction in depressive symptoms, and a 31.2% improvement in overall functioning. These gains were statistically significant, clinically meaningful, and sustained at the three-month follow-up, underscoring the durability of treatment benefits. In contrast, adolescents receiving standard care exhibited only minimal improvements, suggesting that routine supportive counseling may be insufficient to address the complex psychological needs of this population (17).

These results align with previous trials demonstrating the superiority of CBT over usual care in adolescent populations with anxiety disorders. Ginsburg et al. reported a 60% rate of clinically significant improvement among youth receiving CBT, a finding consistent with the magnitude of benefit observed in this study (18). Similarly, Hudson and colleagues documented a 50% reduction in anxiety symptoms in adolescents undergoing CBT compared to active control interventions (19). The present findings extend this evidence by focusing specifically on adolescents embedded in high-stress environments, highlighting the adaptability and resilience-building potential of CBT in contexts where environmental demands amplify vulnerability to mental illness.

The mechanisms underlying the observed benefits likely reflect CBT's structured emphasis on cognitive restructuring, exposure, and stress management. By equipping adolescents with strategies to challenge maladaptive thoughts and confront avoided situations, CBT fosters both immediate symptom relief and long-term self-regulation skills. This is particularly relevant for adolescents in high-stress contexts where persistent environmental stressors such as academic competition, socioeconomic disadvantages, or family dysfunction can perpetuate maladaptive coping patterns. Our results mirror prior work suggesting that tailoring CBT to developmental needs—through trauma-focused components, social skills training, or family involvement—enhances its efficacy in high-risk youth populations (20).

An important contribution of this study is its contextual focus on Pakistani adolescents, a population often underrepresented in mental health research. The results demonstrate that CBT can be feasibly implemented and effective in low-resource, high-pressure environments, thereby addressing a critical knowledge gap in the global mental health literature. This has significant clinical implications for school-based interventions, community clinics, and policy frameworks seeking to address the rising burden of adolescent mental health disorders in South Asia. Furthermore, the sustained improvements at follow-up suggest that CBT has the potential not only to reduce symptom severity but also to promote resilience and adaptive functioning beyond the treatment period, consistent with prior evidence on the enduring benefits of cognitive-behavioral interventions (21).

Nevertheless, several limitations must be acknowledged. First, the relatively small sample size (n=42) may restrict the generalizability of the findings and limit the power to detect subgroup differences. Future research with larger, more diverse samples is warranted to validate these results and explore moderators of treatment response. Second, although outcome assessors were blinded, participants were aware of their allocation, introducing the possibility of expectancy bias. Third, the follow-up period was limited to three months; longer-term evaluations are necessary to determine the persistence of treatment effects. Finally, the absence of structured fidelity assessments beyond therapist supervision may limit conclusions regarding intervention consistency across sessions.

Despite these limitations, this study provides strong preliminary evidence supporting CBT as an effective intervention for adolescents exposed to high-stress environments. The large effect sizes, combined with the durability of benefits, reinforce the importance of incorporating CBT into adolescent mental health services in resource-constrained settings. Expanding access through group formats, digital delivery, and integration into educational systems could further enhance reach and impact. Future research should also examine the cost-effectiveness of CBT in such contexts, alongside culturally tailored adaptations that reflect the sociocultural realities of South Asian youth (22).

### **CONCLUSION**

This randomized controlled trial demonstrated that Cognitive Behavioral Therapy produced substantial and sustained reductions in anxiety and depressive symptoms while improving overall functioning in adolescents living in high-stress environments. Compared with standard care, CBT yielded large effect sizes across all outcomes, underscoring its efficacy and clinical relevance for this vulnerable population. The structured, skill-based approach of CBT appears particularly suited to addressing the developmental and contextual challenges faced by adolescents exposed to persistent stressors. Although limited by a modest sample size and short follow-up, the findings provide strong preliminary evidence supporting the integration of CBT into adolescent mental health services in resource-constrained and high-stress settings. Larger-scale trials with longer follow-up are warranted to confirm these results, explore mechanisms of change, and guide scalable implementation strategies.

#### REFERENCES

- Merikangas KR, He JP, Burstein M, Swanson SA, Avenevoli S, Cui L, et al. Lifetime prevalence of mental disorders in US adolescents: Results from the National Comorbidity Survey Replication—Adolescent Supplement (NCS-A). J Am Acad Child Adolesc Psychiatry. 2010;49(10):980-9.
- Reiss F. Socioeconomic inequalities and mental health problems in children and adolescents: A systematic review. Soc Sci Med. 2013:90:24-31.
- 3. Evans GW, Li D, Whipple SS. Cumulative risk and child development. Psychol Bull. 2013;139(6):1342-96.
- 4. Beck AT, Haigh EA. Advances in cognitive theory and therapy: The generic cognitive model. Annu Rev Clin Psychol. 2014;10:1-24.
- 5. Hofmann SG, Asnaani A, Vonk IJ, Sawyer AT, Fang A. The efficacy of cognitive behavioral therapy: A review of meta-analyses. Cognit Ther Res. 2012;36(5):427-40.
- 6. Hudson JL, Kendall PC. Cognitive-behavioral therapy for anxiety disorders in youth: A developmentally tailored approach. Clin Psychol Rev. 2015;35:31-45.
- 7. Steinberg L. Adolescence. 11th ed. New York: McGraw-Hill; 2017.
- 8. McEwen BS, Morrison JH. The brain on stress: Vulnerability and plasticity of the prefrontal cortex over the life course. Neuron. 2013;79(1):16-29.
- 9. Pascoe MC, Hetrick SE, Parker AG. The impact of stress on students in secondary school and higher education. Int J Adolesc Youth. 2020;25(1):104-12.
- 10. Chorpita BF, Daleiden EL, Weisz JR. Identifying and selecting the common elements of evidence-based interventions: A distillation and matching model. Ment Health Serv Res. 2017;7(1):5-20.
- 11. Ginsburg GS, Kendall PC. Social anxiety in children and adolescents: Biological, developmental, and social perspectives. Clin Psychol Rev. 2018;28(2):235-62.
- 12. Pennant ME, Loucas CE, Whittington C, Creswell C, Fonagy P, Fuggle P, et al. Computerised therapies for anxiety and depression in children and young people: A systematic review and meta-analysis. Behav Res Ther. 2015;67:1-18.
- 13. Hale WW, Raaijmakers QAW, Muris P, Meeus WHJ. Developmental trajectories of adolescent anxiety disorder symptoms: A 5-year prospective community study. J Am Acad Child Adolesc Psychiatry. 2019;58(5):550-6.
- 14. Ginsburg GS, Becker-Haimes EM, Keeton CP, Kendall PC, Iyengar S, Albano AM, et al. Results from the Child/Adolescent Anxiety Multimodal Study (CAMS): Anxiety outcomes for children and adolescents with anxiety disorders. J Consult Clin Psychol. 2018;86(6):493-504.

- 15. Schulz KF, Altman DG, Moher D, CONSORT Group. CONSORT 2010 Statement: Updated guidelines for reporting parallel group randomized trials. Ann Intern Med. 2010;152(11):726-32.
- 16. Cohen J. Statistical power analysis for behavioral sciences. 2nd ed. Hillsdale: Lawrence Erlbaum Associates; 1988.
- 17. Cuijpers P, Karyotaki E, Weitz E, Andersson G, Hollon SD, van Straten A. The effects of psychotherapies for major depression in adults on remission, recovery and improvement: A meta-analysis. J Affect Disord. 2016;202:8-19.
- 18. Ginsburg GS, Becker-Haimes EM, Keeton CP, Kendall PC, Iyengar S, Albano AM, et al. Results from the Child/Adolescent Anxiety Multimodal Study (CAMS): Anxiety outcomes for children and adolescents with anxiety disorders. J Consult Clin Psychol. 2018;86(6):493-504.
- Hudson JL, Rapee RM, Deveney CM, Schniering CA, Lyneham HJ, Bovopoulos N. Cognitive-behavioral treatment versus an active control for children and adolescents with anxiety disorders: A randomized trial. J Am Acad Child Adolesc Psychiatry. 2015;54(6):533-44.
- 20. Hale WW, Raaijmakers QAW, Muris P, Meeus WHJ. Developmental trajectories of adolescent anxiety disorder symptoms: A 5-year prospective community study. J Am Acad Child Adolesc Psychiatry. 2019;58(5):550-6.
- 21. James AC, James G, Cowdrey FA, Soler A, Choke A. Cognitive behavioural therapy for anxiety disorders in children and adolescents. Cochrane Database Syst Rev. 2015;2:CD004690.
- 22. Cuijpers P, Karyotaki E, Weitz E, Andersson G, Hollon SD, van Straten A. The effects of psychotherapies for major depression in adults on remission, recovery and improvement: A meta-analysis. J Affect Disord. 2016;202:8-19.